7 Surveillance

Effective Vaccine Preventable Disease (VPD) surveillance at national, state and local levels serves to document the impact of vaccination programs, evaluate the effectiveness of current vaccines and vaccination policies, and identify needed changes in program strategies. It also monitors progress toward disease reduction and elimination goals and serves to signal the need for public health responses.

Surveillance is used to evaluate the impact of changes in immunization policies such as the introduction of acellular pertussis vaccines for use in infants and the use of the all-IPV schedule for the prevention of poliomyelitis. Surveillance is especially critical following the introduction of a new vaccine to monitor post-licensure vaccine safety, coverage and decline in disease. For other diseases such as hepatitis B, surveillance may rely heavily on laboratory screening of high risk populations and reporting of chronically infected persons as steps in preventing transmission.

Keywords:
Active and passive surveillance
Adverse events
Case definition
Case investigation
Council of State and Territorial Epidemiologists (CSTE)
Disease reporting
HBsAg Screening
Laboratory reporting
Morbidity and mortality
National Childhood Vaccine Injury Act
National Electronic Disease Surveillance System (NEDSS)
National Electronic Telecommunications System for Surveillance (NETSS)
Sentinel sites
Vaccine Adverse Events Reporting System (VAERS)
Vaccine Preventable Diseases (VPDs)

The Council of State and Territorial Epidemiologists (CSTE) has the responsibility to decide what diseases should be reported nationally. Priority areas of concern for CSTE are surveillance and epidemiology of infectious diseases, chronic diseases and conditions, and environmental health concerns. CSTE promotes the effective use of epidemiologic data to guide public health practices and improve health. This is accomplished by supporting the use of effective public health surveillance and good epidemiologic practice through training, capacity development, peer consultation, developing standards for practice, and advocating for resources and scientifically based policy.

The role of immunization programs in VPD surveillance varies considerably from state to state, with many immunization programs sharing this responsibility to a greater or lesser degree with other organizational sections, branches, or divisions responsible for general communicable disease control or epidemiology. However, to meet the national disease elimination objectives established for VPD surveillance, activities will need to be intensified and enhanced. With many VPDs at all time low levels, the involvement of

immunization program management and staff will be essential to assure complete case identification and thorough case investigation.

The success of immunization programs in reducing vaccine-preventable diseases to record low levels has given rise to increased concerns about vaccine safety. Monitoring adverse events and addressing vaccine safety concerns is an essential part of an immunization program. The National Childhood Vaccine Injury Act of 1986 mandated the reporting of certain adverse events following immunization. This Act led to the establishment of the Vaccine Adverse Event Reporting System (VAERS), a spontaneous reporting system for adverse events following receipt of any U.S. licensed vaccine. VAERS is operated jointly by the Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA). VAERS is the cornerstone of a comprehensive vaccine safety monitoring program to maintain public confidence in vaccines and vaccination programs.

Public and private immunization programs perform a critical role in vaccine safety by ensuring that their providers report suspected adverse events following vaccination through VAERS. By collating and analyzing VAERS nationwide, CDC is able to identify and respond to vaccine-associated risks potentially not identified in pre-licensure assessments. In addition, VAERS can detect unusual increases in recognized events, vaccine lots with unusual numbers or types of reported events, and, by collecting and following up additional case information, may detect pre-existing conditions that may be contraindications to vaccination. Results of VAERS analyses are used to trigger investigations of hypothesized relationships between a vaccine and adverse events.

VAERS data are available via the VAERS web site (see below). Routine updates and/or custom searches are available to grantees on request from the VAERS program. Adverse events designated as serious require additional follow-up by the VAERS program to obtain more complete medical information with which to evaluate the case. These and other enhancements to CDC's vaccine safety efforts will add to the knowledge regarding vaccine safety and help maintain confidence in our vaccination programs.

Currently the National Childhood Vaccine Injury Act specifies vaccines/toxoids and types of events that must be reported. However, health care providers are encouraged to report all clinically significant events to VAERS. Reporting forms and instructions are available from the VAERS web site (www.vaers.org), or by calling 1-800-822-7967, or sending an e-mail to info@vaers.org.

To modernize and enhance public health surveillance and information systems, CDC and its public health partners are implementing the National Electronic Disease Surveillance System (NEDSS). CDC's NEDSS implementation strategies include ensuring that the relevant activities of state and local immunization programs are consistent with the functional and technical specifications of the NEDSS information architecture. State and local immunization programs should evaluate current activities with respect to the NEDSS information systems architecture and begin to modify these

activities, if necessary, so that they are consistent with NEDSS specifications. Information describing these specifications can be found on the internet at http://www.cdc.gov/od/hissb/docs/NEDSSSysArcht1.pdf

ACTIVITY AREAS
7.1 Disease Surveillance and Response
7.2 VPD Reporting
7.3 Perinatal Hepatitis B Screening
7.4. Vaccine Safety

References:
- Manual for the Surveillance of Vaccine Preventable Diseases, (CDC)
- Healthy People 2010 National Objectives, (DHHS)
- Morbidity and Mortality Weekly Report (CDC) website: (www.cdc.gov/mmwr/)
- Standards for Pediatric, Adolescent Immunization Practices (NVAC)
- Standards for Adult Immunization Practices (NVAC)
- Managing a Hepatitis B Prevention Program: A Guide to Life as a Program Coordinator (CDC)
- Hepatitis Surveillance Report (CDC NCID DVRD Hepatitis Branch, Report No. 56, April 1995.36 p.)
- CSTE web site (www.cste.org)
- VAERS web site (www.vaers.org)
- NEDSS web site (www.cdc.gov/od/hissb/docs/NEDSSSysArcht1.pdf)

7.1 DISEASE SURVEILLANCE AND RESPONSE

For additional details, refer to the Manual for Surveillance of Vaccine -Preventable Diseases.

ACTIVITIES to establish, enhance, and maintain a system to identify and investigate cases and control outbreaks of VPDs:

7.1.0 ELEMENTS of a VPD surveillance and response system:
- Active and/or passive surveillance
- Sentinel reporting sites
- Laboratory reporting
- Case finding techniques
- Systematic collection of reports on suspected cases
- Investigation of suspected cases
- Interpretation of case reports
- Outbreak control activities

✓ **7.1.1** Develop administrative policies and procedures to assure the systematic, institutionalized reporting of cases and suspected cases of VPDs by providers, health care institutions, and laboratories.

✓ **7.1.2** Obtain the authority for health department staff to review medical records of persons who are cases or suspected cases of all VPDs.

✓ **7.1.3** Ensure availability of written up-to-date guidelines for case investigation, outbreak investigation**,** and outbreak control of all VPDs.

✓ **7.1.4** Ensure that health department staff responsible for VPD surveillance and response is trained to perform VPD case and suspect case investigations, outbreak investigations**,** and outbreak control.

✓ **7.1.5** Initiate VPD case investigations and outbreak investigations promptly and complete outbreak control measures in a timely manner.

✓ **7.1.6** Develop and distribute written up-to-date laboratory guidelines for each VPD detailing the appropriate clinical specimens to obtain, recommended laboratory tests and laboratories, specimen handling, and expected time lines for laboratory results.

✓ **7.1.7** Ensure that clinics, schools, day care facilities, hospitals and other VPD sentinel sites routinely submit surveillance reports to health departments.

✓ **7.1.8** Conduct enhanced, active surveillance in communities where a VPD is prevalent.

7.1.9 Pursue unreported cases of VPDs by searching laboratory, hospital and/or death certificate data.

✓ **7.1.10** Ensure that procedures exist and are followed for entering and analyzing surveillance, investigation and outbreak data in a timely fashion.

✓ **7.1.11** Analyze, review and interpret surveillance data regularly, and outbreak data as needed.

✓ **7.1.12** Monitor the quality of VPD surveillance by reviewing surveillance indicators, problems identified, and strategies developed and implemented to address them.

✓ **7.1.13** Ensure feedback of surveillance data to case reporters, institutions involved and all other surveillance participants.

<u>Congenital Rubella Syndrome (CRS)</u>

✓ **7.1.14** Investigate each suspected case of CRS. Collect demographic information,
☞ maternal history (complete vaccination information, prior pregnancies, and country of these births/pregnancies, previous laboratory testing, country of birth and clinical symptoms during pregnancy), infant's clinical details (e.g., cataracts, hearing impairment, developmental delay, type of congenital heart defect, meningoencephalitis, microcephaly), and laboratory tests and results for both mother and child including infant IgM. Obtain clinical specimens for rubella virus isolation (e.g., pharyngeal swabs) from all probable and confirmed cases of Congenital Rubella Syndrome.

Diphtheria

✓ **7.1.15** Investigate each suspected case of diphtheria. Collect demographic data,
☞ complete vaccination information, travel information, specimens for diagnostics, details of clinical syndrome, treatment, and outcome. Investigate household and other close contacts; collect specimen for culture at time of initial investigation.

Haemophilus influenzae

✓ **7.1.16** Investigate cases of *Haemophilus influenzae* invasive disease among children
☞ <15 years of age. Promote laboratory reporting of cases. Collect demographic data, complete vaccination information (date, manufacturer, lot number), type of clinical syndrome (meningitis, bacteremia, pneumonia), and outcome, specimen sources (CSF, blood, joint fluid) and isolate serotype.

Performance Measure: *The proportion of Haemophilus influenzae invasive disease cases among children <5 years of age with vaccination information complete (dose number, date, manufacturer, lot number)*
Target: *95%*

Performance Measure: *The proportion of Haemophilus influenzae isolates from cases <5 years of age that were serotype*
Target: 95%

Hepatitis A

✓ **7.1.17** Investigate reported cases to confirm diagnosis, identify risk factors for
☞ transmission, identify missed opportunities for vaccination, and assure administration of post-exposure prophylaxis to contacts at risk. Assure laboratory reporting of IgM anti-HAV positive results to health department.

Hepatitis B

✓ **7.1.18** Investigate reported cases to confirm diagnosis, identify risk factors for
☞ transmission, identify missed opportunities for vaccination, assure appropriate counseling, refer for medical management, and ensure post-exposure prophylaxis of household and sexual contacts of HBsAg positive women. *See Chapter 7.3 Perinatal Hepatitis B Screening*. *Also see Chapter 4: Perinatal Hepatitis B Prevention*

✓ **7.1.19** Assure that laboratories report all HBsAg-positive and IgM anti-HBc-positive test results to the health department.

✓ **7.1.20** Assure immediate reporting of HBsAg-positive results in pregnant women by prenatal care providers and birthing hospitals and health department collaboration in tracking infants of HBsAg women.

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Performance Measure: % of HBsAg positive pregnant women reported to the health department.
Target: At least 90% of expected births to HBsAg positive pregnant women.

✓ **7.1.21** Maintain a registry of persons with HBsAg-positive results.

Influenza
✓ **7.1.22** Collaborate with state/local influenza surveillance coordinators in developing plans for timely and coordinated dissemination of influenza vaccination promotions. Also ensure that state and local influenza virus surveillance data is disseminated to providers and the public during each influenza season.

Measles
✓ **7.1.23** Investigate suspected case of measles promptly; for each case, collect ☞ demographic information, complete vaccination information, transmission setting, source of exposure, clinical symptoms, and laboratory findings.

Performance Measure: *The proportion of measles cases for which measles vaccination status is obtained*
Target: *100%*

Performance Measure: *The proportion of measles cases or chains of transmission with an imported source*
Target: *100%*

✓ **7.1.24** Obtain laboratory confirmation of measles cases, preferably by capture IgM assay. Collect specimens (urine or nasopharyngeal swabs) for virus isolation and typing from every probable or confirmed measles case at the time of initial evaluation (no later than seven days following rash onset); in larger outbreaks, specimens are collected from four or more cases.

Performance Measure: *The proportion of measles cases that are laboratory confirmed*
Target: *95%*

Performance Measure: *The proportion of measles cases or chains of transmission for which a specimen for virus isolation is collected and sent to CDC*
Target: *95%*

Mumps

✓ **7.1.25** Investigate suspected cases of mumps promptly; collect demographic ☞ background, complete vaccination information, transmission setting, source of exposure, clinical symptoms and outcome, clinical specimens and laboratory findings. A mumps serology (IgM) should be collected on all suspected cases.

Performance Measure: *The proportion of suspected cases of mumps for which appropriate clinical specimens were obtained and submitted to the laboratory*
Target: *Set by individual program; progress toward 90%*

Performance Measure: *The proportion of confirmed and probable cases for which complete vaccination status is known*
Target: *Set by individual program; progress toward 90%*

Pertussis

✓ **1.26** Investigate suspected cases of pertussis promptly. For all cases of children ☞ <10 years of age collect transmission setting, source of exposure, clinical symptoms and outcome, and results of nasopharyngeal specimen cultures. For adolescents and adults, collect demographic background, dates of each vaccination, type of vaccine (DPT or DTaP), lot number, and manufacturer. Investigate household and other close contacts of cases; collect and submit nasopharyngeal specimens at time of initial evaluation.

Performance Measure: *The proportion of suspected cases from which clinical specimens are obtained*
Target: *>90 %*

Performance Measure: *The proportion of pertussis cases meeting the clinical case definition that are culture-confirmed*
Target: *Set by individual program, but at least 60%*

Performance Measure: *The proportion of cases confirmed by isolation of B pertussis by culture*
Target: *Set by individual program, but at least 30%*

Performance Measure: *The proportion of probable and confirmed pertussis cases among children <10 years of age for which a vaccination history was completed, including type of vaccine and lot number for each dose*
Target: *90%*

Polio

✓**7.1.27** Investigate promptly cases of acute flaccid paralysis. Collect demographic

☞ background, complete vaccination information (dates of each vaccination, type of vaccine and lot #), transmission setting, source of exposure, clinical symptoms and outcome, and laboratory findings; obtain, properly transport and process stool specimens for virus isolation.

Pneumococcal Invasive Disease

✓ **7.1.28** Investigate all cases of invasive Pneumococcal disease among children <5 ☞ years of age (e.g. serotype, antibiotic resistance).

Performance Measure: *The proportion of Pneumococcal invasive disease cases among children <5 years of age for whom complete vaccination information (type, date, manufacturer, lot number) was collected*
Target: *Set by individual program; progress toward 95%*

Performance Measure: *The proportions of Pneumococcal isolates from cases of invasive disease <5 years of age that are serotype and checked for antibiotic resistance*
Target: *Set by individual program; progress toward 100%*

7.1.29 Identify possible failures of vaccine in children <5 who received at least one dose of Pneumococcal conjugate vaccine and have Pneumococcal infection (i.e., cases where Streptococcus pneumoniae is isolated from a normally sterile site such as blood or CSF). In cases where these criteria are met, isolates should be sent to CDC through the state laboratory with a completed tracking form. (Forms can be obtained by calling the CDC Respiratory Diseases Branch at 404-639-2215.)

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Performance measure*: Number and percent of vaccine failures meeting the criteria*
Target: *Set by individual programs*

Rubella

✓ **7.1.30** Investigate suspected cases of rubella; collect demographic information, ☞ country of origin, complete vaccination information, transmission setting, source of exposure, clinical symptoms, and laboratory findings (e.g., rubella IgM antibody or paired sera for rubella IgG), and for women, pregnancy status and, if pregnant, outcome of pregnancy; obtain clinical specimens for rubella virus isolation (e.g., pharyngeal swabs) from all probable and confirmed cases of rubella. In outbreak settings, obtain clinical specimens from three to four cases for viral isolation.

Performance Measure: *The proportion of confirmed rubella cases among women of child-bearing age with known pregnancy status*
Target: *100 %*

Performance Measure: *The proportion of confirmed rubella cases that are laboratory confirmed*
Target: *95%*

✓ **7.1.31** Assure prenatal screening of all pregnant women for rubella antibody, and documentation of results in provider and birthing hospital chart.

Performance Measure: *Number and percent of pregnant women with documentation of rubella status in pre-delivery hospital record*
Target: *Set by individual program; progress toward 100%*

✓ **7.1.32** Assure rubella antibody-negative mothers are made aware of benefits and risks of rubella vaccine, offered rubella vaccine following delivery, and acceptors receive the vaccine before hospital discharge.

Performance Measure: *Number and percent of rubella antibody-negative pregnant women receiving rubella vaccine following delivery and prior to discharge*
Target: *Set by individual program; progress toward 100%*

Tetanus

✓ **7.1.33** Ensure the investigation of reported cases of tetanus; collect demographic ☞ and vaccination history for all recommended vaccines, predisposing conditions (e.g., IV drug use, body piercing, tattoo) including a history of wound or injury, clinical symptoms and outcome.

Varicella

✓ **7.1.34** Encourage providers, schools, and others to report all cases of varicella to the health department with age, varicella vaccination history, and severity of disease data. Severity of disease is categorized as mild (<50 lesions, in which case the lesions can be counted within 30 seconds), severe (>500 lesions, in which case the lesions are clumped so closely together one can hardly see normal skin), and moderate (anything between mild and severe).

Performance Measure: *Number and annual percent decline of reported cases by age groups*
Target: *Set by individual program; progress towards 90%*

✓ **7.1.35** Investigate reports of varicella-related deaths. Collect demographic and ☞ complete vaccination information, transmission setting, source of exposure, and clinical symptoms and outcome.

✓ **7.1.36** Investigate varicella outbreaks occurring in schools, child care and institutional facilities, and offer control efforts either through provision of vaccine in public clinics or by referrals to primary health care providers. In outbreak settings, obtain clinical specimens from at least one case for verification of varicella virus.

7.2 VPD REPORTING

ACTIVITIES to measure VPD morbidity and mortality, and evaluate the impact of new vaccines and immunization policies:

✓ **7.2.1** Complete and transmit both case reports and supplemental surveillance ☞ information to CDC on appropriate CDC forms by mail or via NETSS. Completed CDC form/NETSS screen due to CDC within one month of diagnosis of all reported cases of measles, pertussis, congenital rubella, and rubella, and cases of invasive Hib and invasive Pneumococcal disease in children less than five years old.

Performance Measure: *Percent of case reports for disease submitted to CDC within one month of diagnosis*
Performance Measure: *Percent of cases requiring supplemental surveillance information submitted to CDC*
Targets: *90%*

✓ **7.2.2** Disseminate surveillance morbidity and mortality data regularly to network participants, providers, policy makers, and the public.

Congenital Rubella Syndrome (CRS)
✓ **7.2.3** Report to CDC all cases of CRS on form CDC 71-17 Rev 3-95.
☞

Performance Measure: *Proportion of CRS cases for which the completed case report or NETSS screen were submitted within one month of diagnosis or receipt of case report*
Target: *100%*

Diphtheria
✓ **7.2.4** Report results of initial investigation of suspected cases to CDC by telephone ☞ immediately.

Haemophilus influenzae
✓ **7.2.5** Report each confirmed case of *Haemophilus influenzae* invasive disease in ☞ children <15 years of age to CDC and submit supplemental surveillance information within one month of diagnosis including serotype via NETSS or by using the National Bacterial Meningitis and Bacteremia Case Report form (CDC 52.15 Rev 02-93).

Performance Measure: *Proportion of cases of Haemophilus influenzae invasive disease in people <15 years of age for which a completed case or NETSS extended report was submitted within one month of diagnosis*
Target: *100%*

Hepatitis A

✓ **7.2.6** If applicable, report each confirmed case of Hepatitis A among persons <19 ☞ years of age to CDC via NETSS or using the Viral Hepatitis Case Report form (CDC 53.1 Rev 6-93).

Performance Measure: *Proportion of acute cases of hepatitis A among people <19 years of age for which a Viral Hepatitis Case Report (CDC Form 53.1) or NETSS extended record for hepatitis was submitted*
Target: *100%*

Hepatitis B

✓ **7.2.7** Report each confirmed case of Hepatitis B among persons <19 years of age to ☞ CDC via NETSS or using the Viral Hepatitis Case Report form (CDC 53.1 Rev 6-93).

Performance Measure: *Proportion of acute cases of hepatitis B among people <19 years of age for which a Viral Hepatitis Case Report (CDC Form 53.1) or NETSS extended record for hepatitis was submitted*
Target: *100%*

Measles

✓ **7.2.8** Report each confirmed case of measles to CDC by telephone or FAX and ☞ submit supplemental surveillance information within one month of diagnosis via NETSS or the Measles Case Worksheet.

Performance Measure: *Proportion of confirmed measles cases for which a completed case report was submitted by mail or NETSS within one month of diagnosis*
Target: *100%*

✓ **7.2.9** Collect and submit to CDC quarterly the number of discarded measles cases ☞ which do and do not meet the case definition**.** Report is due within 30 days of the close of each quarter.

Mumps

✓ **7.2.10** Report each confirmed case of mumps to CDC via NETSS, telephone or FAX.
☞

Pertussis

✓ **7.2.11** Report each probable or confirmed case of pertussis to CDC and submit ☞ supplemental surveillance information within one month of diagnosis via NETSS or using the pertussis case report form (CDC 71.14A Rev 6-68).

Performance Measure: *Proportion of pertussis cases for which the completed case report or NETSS screen were submitted within one month of diagnosis*
Target: *100%*

Pneumococcal Invasive Disease

✓ **7.2.12** Report each confirmed case of invasive Pneumococcal disease in children ☞less than 5 years of age to CDC and submit supplemental surveillance information within one month of diagnosis via NETSS or by using the National Bacterial Meningitis and Bacteremia Case Report form (CDC 52.15 Rev 02-93).

Polio

✓ **7.2.13** Report each suspected case of paralytic poliomyelitis to CDC immediately by ☞ telephone.

Rubella

✓ **7.2.14** Report each confirmed case of rubella to CDC promptly by telephone or FAX ☞ and submit supplemental surveillance information within one month of diagnoses via NETSS.

Performance Measure: *Proportion of rubella cases for which the completed case report or NETSS screen were submitted within one month of diagnosis*
Target: *100%*

Tetanus

✓ **7.2.15** Report each case of tetanus to CDC and submit supplemental surveillance ☞ information within one month of diagnosis via NETSS or using tetanus case report form (CDC71.16 Rev 9-96).

Varicella

✓**7.2.16** Report each varicella-related death to CDC using CDC Varicella Death ☞ Investigation Work Sheet.

7.2.17 Report cases of varicella to CDC within one month of diagnosis. See section 7.1.34 for reporting criteria.

7.3 PERINATAL HEPATITIS B SCREENING

For additional details, refer to Chapter 4.3 Perinatal Hepatitis B Prevention

ACTIVITIES to identify HBsAg-pregnant women and prevent perinatal hepatitis B transmission:

✓ **7.3.1** Establish a program-wide system to screen all pregnant women for HBsAg and ensure appropriate prophylactic immunization of their infants and household contacts.
See 7.3.0 ELEMENTS of perinatal hepatitis B prevention program.

✓ **7.3.2** Assure that prenatal care patients are routinely screened for HBsAg status and procedures for documenting screening results in prenatal care records and hospital medical charts of both mothers and infants are in place and being followed.

7.3.0 ELEMENTS of a perinatal hepatitis B prevention program:
- Maternal HBsAg screening (surveillance)
- Reporting and documentation of screening results
- Case management of infants born to HBsAg-positive mothers
- Follow-up of household contacts

Performance Measure: *Percent of pregnant women screened for HBsAg status during current pregnancy*
Target: *At least 90% of all pregnant women.*

✓ **7.3.3** Assure that prenatal care providers, delivery hospitals and laboratories report HBsAg-positive pregnant women to the appropriate health department office.

Performance Measure: *Percent of expected births to HBsAg positive pregnant women reported to the health department.*
Target: *90% of expected births to HBsAg positive pregnant women.*

✓ **7.3.4** Assure that all delivery hospitals and pediatric well care providers report infants born to HBsAg-positive pregnant women to the appropriate health department office.

Performance Measure: *Percent of infants born to HBsAg positive pregnant women reported to health departments*
Target: *At least 90% of expected births to HBsAg positive pregnant women.*

7.3.5 When appropriate, support and assist in the drafting of laws and/or regulations that require prenatal care providers and birthing hospitals to document the HBsAg status of all pregnant women during each pregnancy and laboratories to report HBsAg-positive tests to the health department.

7.4 VACCINE SAFETY

See *Chapter 4 Provider Quality Assurance* and *Chapter 6 Consumer Information* for additional activities related to vaccine safety.

ACTIVITIES to maintain a system to monitor the safety of immunizations:

✓ **7.4.1** Ensure at least one employee is designated with overall responsibility for ☞ vaccine safety and VAERS reporting. Duties should include filling out VAERS forms, promptly reviewing all VAERS reports received, submitting reports to VAERS contractor within seven days of receipt, collecting and forwarding supplemental medical information, answering provider and parent VAERS and vaccine safety inquiries, and fielding communication with and from media.

✓ **7.4.2** Establish/maintain protocols and systems to accept and report adverse events following immunization (VAERS) submitted by public and private health care providers, parents, and vaccinees.

Performance Measure: *Increase in the number of adverse events reported to the immunization program office, by vaccine type and reporting source*
Target: *Set by individual program*

✓ **7.4.3** Review all VAERS reports upon receipt; verify accuracy of key information on form, attempt to complete critical fields, and assign an immunization project number. If all critical information cannot be obtained by the grantee then the report should be forwarded to VAERS if it contains at least the following: a patient identifier (nominal or non-nominal); a vaccine; an adverse event; and an identifiable reporter (of the adverse event)**.**

Performance Measure: *Number and percent of VAERS reports submitted to the contractor within five working days of receipt*
Target: *>90%, set by individual program*

✓ **7.4.4** Routinely obtain supplemental medical information (e.g., autopsy reports, ☞ death certificates, hospital discharge summaries) related to every serious adverse event reported (e.g., death, life-threatening illness, hospitalization, permanent disability).

Performance Measure: *Number and percent of serious adverse event reports for which supplemental medical information was collected*
Target: *> 90% set by individual program*

✓ **7.4.5** Submit supplemental medical information requested by the national VAERS
☞ program within ten working days of receipt of request.

Performance Measure: *Number and percent of requested supplemental reports submitted within ten working days of receipt of request*
Target: *> 90% set by individual program*

ACTIVITIES to ensure that all providers of immunizations report adverse events according to state and/or local public health policies:

✓ **7.4.6** Ensure all local health departments and public health clinics know to report
☞ and report adverse events to the grantee using the VAERS form.

Performance Measure: *Percent of adverse events reported by public clinics for which a VAERS form was received*
Target: *100%*

✓ **7.4.7** Provide all immunization providers (public and private) with a copy of state policies on VAERS reporting, a copy (ies) of the VAERS reporting form, instructions on which adverse events must be or may be reported, and on completing and submitting the form, and updates on VAERS reporting as they arise.

Performance Measure: *Number of newly licensed providers (e.g., pediatricians, family practitioners, general practitioners, clinics) and percent of those provided VAERS and other safety information and training*
Target: *>90% set by individual program*

7.4.8 Encourage providers to submit VAERS reports on adverse events not listed in the National Vaccine Injury Table.

7.4.9 Communicate information on vaccine safety in a timely way to all health care providers, public health officials, state professional associations and the public.